DAC #6

11 July, 2000

MEMORANDUM FOR: COMMISSIONER OF PATENTS AND TRADEMARKS
WASHINGTON DC 20231

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FROM: 377 ABW/JAN
2251 MAXWELL AVE SE
KIRTLAND AFB, NM 87117

SUBJECT: Patent Application entitled: "Apparatus for Isolation of Payloads with Low Transmissibility" - PRIOR ART

Applicants: Rastegar et al.
Serial No.: 09/517,434
Filed: 2 March 2000

1. The above-identified patent application arose under USAF contract No. F29601-99-C-0019 with OmniTek R&D Inc. The application did not include a notice of the Government's interest in this invention. I am requesting OmniTek correct this omission.
2. In addition, one of the listed inventors is Ronald Rothchild. He sent to Capt. Hill, the project manager, some information that should be considered when this application is examined, including some relevant prior art. This material is enclosed. The other listed inventors are Jahangir Rastegar and Farshad Khorrami, both principals of OmniTek. Dr. Rothchild claims that if there is any patentable material in this application, he is the only actual inventor. For these reasons, he had refused to sign the declaration.

KENNETH E. CALLAHAN
Patent Attorney
377 ABW/JAN
505 846-1542

Ronald D. Rothchild, Sc.D.
33 Laurie Boulevard • Bethpage, NY 11714
voice (516) 935-2673 • fax (516) 827-5176

28 March 2000

Captain Stephen Hill
AFRL/VSSV, Bldg. 472
3550 Aberdeen Ave. SE
Kirtland AFB, NM 87117

Dear Captain Hill:

I am a former employee of OmniTek R&D. There have been indications that my role in the launch vehicle payload isolation development, which I understand you are now managing for the Air Force, has been misrepresented to the detriment of my professional reputation. Having no way to know the full context and extent of this misrepresentation, I am contacting people who have been involved with the development to make certain that the record is clear. The work was performed for the Air Force, so my references to it do not breach confidentiality.

Recently I was forced to take the unusual step of refusing to sign a patent declaration related to OmniTek's intended filing of a patent application on my work there. I took this step because the declaration would have been fraudulent in at least two respects:

- It listed me as the third of three inventors (the first two being the company's principals, Rastegar and Khorrami), when in fact I am the sole inventor of whatever is patentable there, and

- It sought to patent much that is already in the public domain, including but not limited to my own engineering work prior to joining OmniTek, and it failed to disclose material prior art, including some that was not only known but was actually used in the development.

Details follow.

My Role as Sole Inventor

The Nonlinear Isolation Mat

The development began in response to published SBIR topic AF98-095, "Vibration Isolation of Launch Vehicle Payloads". I wrote a proposal addressing this topic at OmniTek, based on my previous familiarity with a compact, nonlinear isolation element.

My resume on page 21 of that proposal refers to my previous work with "energy absorbing shoe sole materials". That was a reference to my association with Mr. Eli Cohen, the named inventor in US Patent No. **4,753,021** and other related patents. I am enclosing a copy of that patent's cover sheet with drawing. The shoe sole material illustrated, intended to provide nonlinear shock isolation, is substantially identical to the isolation "mat" for which OmniTek is claiming novelty.

I had used this material, concept, and general configuration for vibration isolation, in the public domain, for several years prior to writing the proposal, and this was made known to Rastegar and Khorrami from the beginning. My hardbound notebook/log at OmniTek records that in late Fall of 1997, while writing the proposal, I contacted Mr. Cohen again with the intent of obtaining some of the material (which was by then in production for the shoe application) for use in our development work if we won the contract.

My log further records that in August 1998 I did make prototype isolation supports in small scale using material that Mr. Cohen provided.

The record clearly shows that I brought this concept to OmniTek (though I also made it clear that I did not consider it a patentable "development").

The Parallelogram Linkage

My proposal did not address the need to prevent payload rotation, because the topic didn't indicate the requirement and I was not aware of it. I learned of the requirement in early March 1998, shortly after learning that we had won the contract.

My OmniTek logbook shows my witnessed disclosure of the use of parallelogram linkages in this application on 17 March 1998. Of course, there is nothing novel about using a parallelogram linkage to prevent rotation; engineers have been doing that for years. I made formal disclosure in this case on the chance that the disclosed use and interaction of multiple linkages to control motion in multiple degrees of freedom, as well as preventing rotation, might be considered novel for patent purposes.

The number of possible minor variations in form is literally infinite. This is why many patents include wording such as "It is understood by those well versed in the art that many other configurations are possible... within the spirit and scope of the invention." The concepts upon which the OmniTek application was based were brought in by me (whether they are novel is a different issue).

There is no question of ownership here. I signed an employment agreement such that my work, to the extent that it is patentable, belongs to OmniTek. However it remains my work. The academic custom of laboratory heads crediting themselves with the work of employees is not appropriate here. In this case a declaration naming any inventor other than me is fraudulent.

Novelty and Disclosure

The Nonlinear Isolation Mat

- It is important to recognize that this is not a case of some possibly relevant prior art being discovered after the fact. Cohen's support/isolation configuration was used in, and was the basis of, OmniTek's development from the beginning, so it is clearly material to patentability under Title 37. Everybody at OmniTek knew about it. Therefore, failure to disclose it to the examiner makes the declaration fraudulent.

- This material and configuration was developed specifically to provide nonlinear isolation support. I had used it for years to provide nonlinear isolation support in non-shoe applications. Therefore there is nothing "novel", in the patent sense, about using it to provide nonlinear isolation support, regardless of the context.

The Parallelogram Linkage

- Honeywell's work with the hydraulic cross-linkage, to prevent rotation in launch payload isolation, long preceded OmniTek's related work. All of us at OmniTek saw a technical paper describing it, prior to devising the parallelogram as a mechanical alternative. Honeywell's work is now covered by U.S. Patent 5,947,240. An application broadly claiming "means" to prevent rotation in this context reads directly on prior art (including Honeywell), so failure to disclose that art similarly makes the declaration fraudulent.

There were other, smaller issues as well, but the above suffices to make the declaration unacceptable. Almost all the informal drawings accompanying the intended filing were photocopies of those I made two years ago, still bearing my hand.

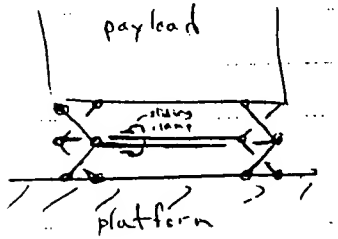
This is a messy business and I regret any inconvenience that may be caused to third parties. However OmniTek has reneged on employee compensation (including mine), continues to obstruct the transfer of my 401K account, and has generally not acted in good-faith, so I am inclined to respond cautiously to demands ostensibly based on my employment agreement. The subject application was far too flawed to fall within the intended scope of my obligations.

Sincerely,

17 March 98

Disclosure: Means to prevent rotational motion of payload in launch vehicle while allowing vibrational translation.

Use parallelogram linkages, eg



If the sliding clamp that holds the crossmembers together is absolutely rigid, then only vertical motion is allowed. If it has some flexibility, then lateral motion is also allowed. In both cases, though, there is no freedom for rotation.

R Rothschild 17 March 98

Witness: [signature] 03/17/98

called Paul Wilke, CSA

1) "axial isolation frequency" is resonance of spacecraft on mounting
2) CSA does "constrained layer damping" – Paul is sending me literature.

18 March 98

(201) 368-3600

called Eli Cohen,

1) Fax # (201) 368-0406
2) E.I to send fax – he will send sample.

20 March 98

I got run some well controlled tests on the active beam damper.

TEST RESULTS

(voltage 1 cps, 0-250 V) (p-p)

1.5 x 2	support block, plain mounting	200 m-inch
3 x 2	" " " lateral beam	250 m-inch
1.5 x 2	" " " reinforcement 1031-006D-2	300 m-inch

all measurements ± 20 m-inch

F2960199C0020
05/06/99

DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 377TH AIR BASE WING (AFMC)

1 Jun 00

MEMORANDUM FOR AFRL/VSSV
ATTENTION: CAPTAIN HILL

FROM: 377TH ABW/JAN (Libby Waits/6-1542)
2251 Maxwell Avenue SE
Kirtland AFB NM 87117-5773

SUBJECT: Security Review of Patent Application Entitled "Apparatus for Isolation of Payloads with Low Transmissibility", No. F29601-99-C-0019, Omnitek R&D, Inc., Prime Contractor; SUSPENSE: 22 Jun 00

1. Contractor has filed a patent application on subject invention, which was conceived or first reduced to practice during performance of the contract.

2. Please review the attached patent application for proper security classification. Should the application be classified, we will seek an Order of Secrecy from the U.S. Patent and Trademark Office to prevent public disclosure of the patent.

3. Please indicate in the space on reverse, by deleting the appropriate language, if the patent application is unclassified; or, if it should be **classified**, indicate the classification level.

4. Please reply to the attention of Libby Waits, **no later than 22 Jun 00**. Should you have any questions, please call us at 846-1542. Thank you.

Kenneth E. Callahan
KENNETH E. CALLAHAN
Patent Attorney, Contract Law and
Laboratory Support Division

lgw

Attachment:
Patent Application "Apparatus for Isolation of Payloads with Low Transmissibility"

TO: 377TH ABW/JAN DATE: 16 Jun 00

In my opinion, the subject patent application "Apparatus for Isolation of Payloads with Low Transmissibility " is:
(Please Circle One)

UNCLASSIFIED CLASSIFIED

PROJECT OFFICER

AFRL/VSSV, 853-7799
OFFICE SYMBOL/PHONE NUMBER

REPORT OF INVENTIONS AND SUBCONTRACTS

(Pursuant to "Patent Rights" Contract Clause) (See Instructions on Reverse Side.)

Form Approved
OMB No. 0704-0240
Expire Sep 30, 1988

1a. NAME OF CONTRACTOR / SUBCONTRACTOR	c. CONTRACT NUMBER	2a. NAME OF GOVERNMENT PRIME CONTRACTOR	c. CONTRACT NUMBER	3. TYPE OF REPORT (X one)
		OmniTek R&D, Inc.	F29601-99-C-0019	X a. INTERIM ☐ b. FINAL
b. ADDRESS (Include ZIP Code)	d. AWARD DATE (YYMMDD)	b. ADDRESS (Include ZIP Code)	d. AWARD DATE (YYMMDD)	4. REPORTING PERIOD (YYMMDD)
1'		1121 Walt Whitman Road, Suit 302 Melville, NY 11747	10 July 1999	a. FROM 10 July 1999 b. TO 15 May 2000

SECTION I - SUBJECT INVENTIONS

5. "SUBJECT INVENTIONS" REQUIRED TO BE REPORTED BY CONTRACTOR / SUBCONTRACTOR (If "None," so state)

a. NAME(S) OF INVENTOR(S) (Last, First, MI)	b. TITLE OF INVENTION(S)	c. DISCLOSURE NO., PATENT APPLICATION SERIAL NO. OR PATENT NO.	d. ELECTION TO FILE PATENT APPLICATIONS				e. CONFIRMATORY INSTRUMENT OR ASSIGNMENT FORWARDED TO CONTRACTING OFFICER	
			(1) United States		(2) Foreign			
			(a) Yes	(b) No	(a) Yes	(b) No	(1) Yes	(2) No
Rastegar, Jahangir Khorrami, Farshad Rothchild, Ronald	Apparatus for Isolation of Payloads with Low Transmissibility	09/517,434 filed March 2, 2000	✓			✓		✓

f. EMPLOYER OF INVENTOR(S) NOT EMPLOYED BY CONTRACTOR / SUBCONTRACTOR		g. ELECTED FOREIGN COUNTRIES IN WHICH A PATENT APPLICATION WILL BE FILED	
(1) (a) Name of Inventor (Last, First, MI)	(2) (a) Name of Inventor (Last, First, MI)	(1) Title of Invention	(2) Foreign Countries of Patent Application
(b) Name of Employer	(b) Name of Employer		
(c) Address of Employer (Include ZIP Code)	(c) Address of Employer (Include ZIP Code)		

SECTION II - SUBCONTRACTS (Containing a "Patent Rights" clause)

6. SUBCONTRACTS AWARDED BY CONTRACTOR / SUBCONTRACTOR (If "None," so state)

a. NAME OF SUBCONTRACTOR(S)	b. ADDRESS (Include ZIP Code)	c. SUBCONTRACT NO.(S)	d. DFAR "PATENT RIGHTS"		e. DESCRIPTION OF WORK TO BE PERFORMED UNDER SUBCONTRACT(S)	f. SUBCONTRACT DATES (YYMMDD)	
			(1) Clause Number	(2) Date (YYMM)		(1) Award	(2) Estimated Completion

PATENT OIPE JC45 JUL 17 2000

SECTION III - CERTIFICATION

7. CERTIFICATION OF REPORT BY CONTRACTOR / SUBCONTRACTOR (Not required if ☐ Small Business or ☐ Non-Profit organization.) (X appropriate box)

a. NAME OF AUTHORIZED CONTRACTOR / SUBCONTRACTOR OFFICIAL (Last, First, MI)	c. I certify that the reporting party has procedures for prompt identification and timely disclosure of "Subject Inventions," that such procedures have been followed and that all "Subject Inventions" have been reported.	
~~Bahangir~~ Rastegar, Jahangir S		
b. TITLE	d. SIGNATURE	e. DATE SIGNED
Vice President	S. Rastegar	5/23/2000

DD Form 882, NOV 87 — *Previous editions are obsolete.* — 882/317